

ABSTRACT

[00213] The present invention concerns compositions, apparatus and methods of use of recognition complexes, comprising biological sensors operably linked to an organic semiconductor. Multiple recognition complexes can be associated into a recognition complex system. The recognition complex system is of use to identify analytes, to separate biological sensors that bind to a target analyte from those that do not, to separate analytes that bind to a specific biological sensor from those that do not, and to prepare biological sensors with a high affinity for a particular analyte. The recognition complex system may be attached to a variety of surfaces, such as a chip, a flow cell, magnetic beads or non-magnetic beads. The biological sensor may be used for screening of, for example, a phage library, combinatorial chemistry library, plant tissue extract or animal tissue extract for inhibitors, activators or binding factors of bioactive molecules.

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